

SOV/110-59-3-9/25

AUTHORS: Gulyakin, V.G., Candidate of Technical Sciences
Tertchnikov, V.N., Engineer

TITLE: A Method of Calculating Transient Processes in Cross-
Field Amplidynes (Metod rascheta perekhodnykh
processov v elektromashinnom usilitеле s poperechnym
polem)

PERIODICAL: Vestnik Elektro promyshlennosti, 1959, Nr 3, pp 36-39(USSR)

ABSTRACT: Transient voltage changes on the armature of an
amplidyne with cross-field excitation depend on both
direct and quadrature axis armature reactions as well
as on the influence of the reaction of the commutating
section and other factors. Direct axis armature reaction
can be fully compensated by appropriate design of the
compensating windings. Usually no provision is made to
compensate armature reaction of the shorted circuit or of
the commutating section which must accordingly be taken
into account when making calculations of transient
processes in cross-field amplidynes. Accurate
calculations are very difficult and a brief analysis is
given of the approximate methods that have been suggested
by different authors. The existing methods that give

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A Method of Calculating Transient Processes in Cross-Field
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sufficient accuracy are still complicated and so this article is devoted to derivation of a simpler approximate method. The method is based on consideration of the relationship between armature reaction and commutating sections and quadrature axis current. A linear relationship is assumed between the armature reaction ampere turns and the quadrature axis current. The graphical method of calculation proposed is then described in detail. It is often necessary to allow for the inertia of the amplidyne control windings and for the influence of external feed back and the necessary procedure is briefly outlined. The procedure can be employed when sub-magnetisation is used. Calculated and experimental transient curves for amplidyne type EMU-110-4a are given in Fig.3 and it will be seen that

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agreement is good. The method can be applied to cross-field amplidynes whatever the method of connecting the field windings. There are 3 figures and 10 Soviet references.

SUBMITTED: 14th July 1958

Card 3/3

ZELENOV, Anatoliy Borisovich; TERTICHNIKOV, Vladimir Nikolayevich;
GULYAKIN, Vladimir Grigor'yevich; LIBERMAN, S.S., red.izd-
va; ISLENT'YEVA, P.G., tekhn. red.

[Electric drives of rolling mills; choice of the power rating
of electric motors and calculation of the parameters of
amplidyne control networks] Elektroprivod mekhanizmov prokat-
nykh stanov; vybor moshchnosti dvigatelei i raschet paramet-
rov skhem elektromashinnogo upravleniya. Pod obshchei red.
A.B.Zelenova. Khar'kov, Metallurgizdat, 1963. 344 p.

(MIRA 16:3)

(Rolling mills--Electric driving)
(Rotating amplifiers)

F J

5117. CLASSIFICATION AND TREATMENT OF BITUMINOUS SHALE, Turtill, S.
(Norta (Pétroleus), June 1950, vol. 6, 165-71). Bituminous shales
can be divided into six groups, depending on their origin. Their
elemental composition varies from 40 to 85% C. They are worked and
treated in U.S.S.R., Scotland, Manchuria, Sweden, France, Germany,
Australia, Italy, and some other countries. Many useful products are
obtained, as well as a high proportion of high-H₂O phenols. Cracking and
hydrogenation may be employed on shale oils with success. I.P.

CA

22

Influence of roasting conditions upon the yield and quality of primary tar from oil shales and sapropel coals. Stanislaw Tertil. *Prace Gdanskiego Inst. Górnictwa, Komisja No. 33*, 21 pp. (1961).—The influence of roasting conditions of sapropel formations on the yield and quality of primary tar, on the viscosity index of raw oils and, and the dependency of the quality of the oil on the kind of the raw material, have been examd. in the lab. app. Optimum roasting temp. for sapropel formation is about 650°, varying slightly with the source of material; increase of rate of heating improves the yield; and reducing the retention time of vapors in the reaction chamber improves the yields. The pressure of the blast has to be carefully regulated if redistn. of undecompr. bitumens is to be avoided. Roasting in H₂ or in water-gas atm. is uneconomic because of cost involved. Preheated steam was satisfactory. Uncondensed gases resulting from the roasting process can be efficiently recycled to cover heat requirements of the process. The gas has a calorific value of 6-8000 kcal./cu. m. This is also beneficial from the stand-point of the process, as only a part of the products has to be condensed; this part is much richer in valuable components. Large amts. of H₂O and the necessity of steam generators constitute a small disadvantage of this method but permit the use of small-size condensing equipment, because of the tenfold greater concn. of primary tar and C₁H₄ in the gaseous distillate. In case of humic sapropel coals, the choice of conditions is dictated by the requirements for asphalts. If less than 60 kg. of asphalts per ton is desired, the steam blast has to be reduced. Detn. of the viscosity indexes of the different products showed, for a given type of sapropel formation, that the process of steam blowing is the most advantageous. A few sapropel formations gave primary tars, which could be used as starting material for further processing into motor fuels by selective refining. Numerous tables showing the influence of different source materials and roasting conditions upon analytical results are included.

A. J. Pitor

"APPROVED FOR RELEASE: 07/16/2001

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"APPROVED FOR RELEASE: 07/16/2001

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420016-0"

MARINOIU, V.; PREDA, I.; ZERTISCO, M.

Devices for studying the dynamic behavior of drilling
units. Bul Inst Petrol Rum 9: 161-169 '63.

FILE:

POLAND/Chemical Technology - Chemical Products and Their
Application. Treatment of Solid Mineral Fuels

I-7

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2446
Author : Tertl, S.
Inst : Institute of Chemical Processing of Coal
Title : Chemical Studies of Bituminous Shale.
Orig Pub : Koks, smola, gaz, 1956, 1, No 3, Biul. Inst. chem. przero-
bki wegla, 12.

Abstract : During investigations of shale occurring at the depth level
of coal strata, a bituminous siderite was discovered that
contains 52.73% iron carbonate; on its low-temperature
carbonization a semicoke was obtained which contains 48.8%
FeO and 35.5% coke. The possibility is noted of utilizing
this kind of fuel for the production of iron coke, oils,
high heat value gas and CO₂.

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"APPROVED FOR RELEASE: 07/16/2001

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420016-0"

TERTIL, S.

TERTIL, S. Extraction of oil from bituminous shale. p. 278

Vol. 9, no. 10, Oct. 1956

CHEMIK

SCIENCE

Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, Feb. 1957

"APPROVED FOR RELEASE: 07/16/2001

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CIA-RDP86-00513R001755420016-0

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CIA-RDP86-00513R001755420016-0"

TERTIL, S.; GRUDZIEN, J.

Processing low-temperature tar from bituminous coal by the method of selective refining. p. 2.

YOKS, SMOLA, GAZ. Katowice, Poland. Vol. 4, no. 1, January/February 1959.

Monthly list of East European Accession (EEAI) LC, Vol. 8, no. 7, July 1959

Uncl.

POLAND/Chemical Technology. Chemical Products and
Their Uses. Part III. Chemical Processing
of Solid Fossil Fuels.

H

Abs Jour : Ref Zhur-Khimiya, No 15, 1953, 51467

Author : Tortil, S.

Inst : Inst. mit. hutn.

Title : Temperature Effect on the Quality and Yield
of Shale Oil Upon Its Distillation with
Superheated Steam.

Orig Pub : Prace Inst. mit. hutn., 1957, 9, No 1,
57-60

Abstract : The effect of temperature (400-600° range)
on the quality and yield of products of
pyrolysis of shale in a stream of super-
heated steam in a laboratory oven was

Card : 1/2

POLAND/Chemical Technology. Chemical Products and II
Their Uses. Part III. Chemical Processing
of Solid Fossil Fuels.

Abs Jour : Ref Zhur-Khimika, No 15, 1958, 51467

studied. It was established that the highest quality of tar was obtained with a satisfactory yield at 450-500°. Upon an increase of temperature to 500-600°, the yield was somewhat increased, but the quality of the product was lowered. At the latter temperatures the oven operated with the highest efficiency. It was noted that the above deductions are not valid for coking of the same shale in tunnel, Otto, or other types of ovens. The reason for this is that vapor-gas distillation products tend to pyrolyze. -- B. Englin

Card : 2/2

64

TERTIL, S.

Chemical research on deposits of bituminous coal schists. Biuletyn. p. 6.
(KOKS, SMOLA, GAZ. Vol. 1, no. 2, Apr./June 1956, Katowice, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 12, Dec. 1957.
Uncl.

TERTIL, S., Grudzien, J.

Brown coal from carbon as a raw material for chemical treatment. Biuletyn. p. 7.
(KOKS, SMOLA, GAZ. Vol. 1, no. 2, Apr./June 1956, Katowice, Poland)

SO: Monthly List of East European Accessions (KEAL) LC. Vol. 6, no. 12, Dec. 1957.
Uncl.

TERTIL, S.

Raw materials replacing petroleum. p. 67.
(CHEMIK, Vol. 10, no. 3, Mar. 1957, Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9. Sept. 1957 Uncl.

TERTIL, D.

POLAND/Chemical Technology. Chemical Products and Their Application.
Treatment of Solid Mineral Fuels.

H-22

Author: Referat Zhur-Khimiya, No 5, 1958, 15693.

Author : Textil S., Grudzien J.

Inst : Institute of the Ministry of Metallurgy

Title : Chemical Processing of Polish Brown Coal of the Carboniferous.

Orig Pub: Prace inst. Min-wa hutn., 1957, 9, No 2, 81-85.

Abstract: Study of specimens of coal varieties found in deposits of sapropelic coal of the eastern wall of the Polish coal basin and classified as appertaining to the category of brown coal of the Carboniferous, as well as study of the low temperature carbonization tars derived from them, has shown that low temperature carbonization produces up to 15% yields of tar and gasoline; from the tar can be produced a motor fuel with a cetane rating of up to 50; the semicoke is characterized by

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POLAND/Chemical Technology. Chemical Products and Their Application.
Treatment of Solid Mineral Fuels.

H-22

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 15693.

a low ash content (5-10% ash) but has inferior mechanical properties. The conclusion is reached that the coal varieties under study are of greater value, in comparison with Polish coal and lignite, in the production of high-grade liquid products, with higher yields, by low temperature carbonization.

Card : 2/2

TERTIL, S.

Composition and transformation of oil from bituminous slates and from its
by-products.

P. 16. (CHEMIK) (Warszaw, Poland) Vol. 10, No. 1, Jan. 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. No. 5, 1958

TERTIL, ST.

POLAND / Chemical Technology, Chemical Products and Their Application. Part 3. - Treatment of Solid Combustible Minerals.

H-21

Abs Jour : Ref. Zhur. Khimiya, No 4, 1958, 12434.

Author : St. Tertil.

Inst : Not given

Title : On The Thermal Treatment of Coal.

Orig Pub : Przem. chem., 1957, 13, No 5, 262 - 263.

Abstract : Discussing the efficiency of the thermal or chemical treatment of coal, it was proposed to accept not the thermal efficiency factor of coal and products of its treatment as the base for efficient determination, but the "coal equivalent", according to which the products of treatment were evaluated in equivalent units of the initial coal.

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POLAND / Chemical Technology, Chemical Products and Their
Application. Part 3. - Treatment of Solid Combustible Minerals.

H-21

Abs Jour : Ref. Zhur. Khimiya, No 4, 1958, 12434.

Abstract : It is shown with an example that in the case of coal semi-coking the thermal efficiency factor is 0.84 and the "coal equivalent" is 1.22, i.e., that there is an excess of 220 kg per ton of treated coal, which would not occur, should this amount of coal be burnt without preliminary treatment.

Card 2/2

TERTIL, Zbigniew

Method of determining the black band commutation zone of
D. C. Przegl elektrotechn 40 no. 2: 83-86 F '64.

1. Zaklad Maszyn Elektrycznych, Akademia Gorniczo-Hutnicza,
Krakow.

BEDNARCEK, Stanislaw; OSTROWSKI, Adam; TERTIL, Zbigniew

Testing and evaluation of Polish-made PYCH metallurgic
generators. Przegl elektrotechn 39 no.3:117-119 Mr '63.

1. Zaklad Maszyn Elektrycznych, Akademia Gorniczo-Hutnicza,
Krakow (for Bednarek and Tertil) 2. Zaklad M-5, Wroclaw
(for Ostrowski).

TERTIL, Zbigniew

Measurement determination of the commutation of a direct current electric machine in transient state. Przegl elektrotechn 40 no.12:511-513 D '64.

1. Institute of Electric Machines of the School of Mining and Metallurgy, Krakow.

TERTIL, Zbigniew, dr inż.

Model of a traverse magnetic circuit of a D.C. machine. Wiad
elektrotechn 32 no.3:76-77 Mr '65.

1. Institute of Electric Machines of the Academy of Mining and
Metallurgy, Krakow.

TSVILING, A.Ya., kand.tekhn.; TERTILOVA, A.G., inzh.

Determination of lead in canned foods by chromatographic semimicro-analysis. Trudy OTIPiKhP 9 no.2:149-153 '59. (MIRA 13:9)
(Food, Canned) (Lead-- Analysis)

KROTOV, Ye.G.; TERTILOVA, A.G.

Causes of the deterioration of the color of rose preserves
in storage. Izv. vys. ucheb. zav.; pishch. tekhn. no.2:61-66
'60. (MIRA 14:7)

1. Odesakiy tekhnologicheskiy institut pishcheyoy i kholodil'noy
promyshlennosti, kafedra biokhimii i mikrobiologii,
(Armenia--Attar of rses)

MARKH, A.T., doktor tekhn.nauk, prof.; FEL'DMAN, A.L. kand.tekhn.nauk, dotsent;
KAGAN, I.S.; kand.tekhn.nauk; KROTOV, Ye.G.; kand.tekhn.nauk; MARKH,
Z.A., starshiy nauchnyy sotrudnik; TEXTILOVA, A.G., assistent

Factors responsible for the darkening of pickled pasteurized cabbage.
Trudy OTIPiKhP 9 no.2:3-19 '59. (MIRA 13:9)

1. Kafedra biokhimii i mikrobiologii Odesskogo tekhnologicheskogo
instituta pishchevoy i kholodil'noy promyshlennosti i Ukrainskiy
nauchno-issledovatel'skiy institut konservoy promyshlennosti.
(Cabbage)

TERTIS, A.

N/5
611.91
.R9111

RYAUZOV, NIKOLAY NIKOLAYEVICH BANKOVSKAYA STATISTIKA (BANKING
STATISTICS, BY) N. RYAUZOV I A. TERTIS.

MOSKVA, GOSFINIZDAT, 1956. 231 p. TABLES.

DUMITRESCU, Stelian; MARINOIU, Vasile; TERTISCO, Mihai

Experimental increasing of the dynamic characteristics of some equipment in the oil industry. Probleme automatiz 4:79-86 '63.

L 29638-66 T WE

ACC NR: AP6020130

SOURCE CODE: RU/0011/65/009/005/0212/0217

AUTHOR: Racoveanu, N. (Engineer); Dumitrescu, I. (Engineer); Tertisco, M. (Engineer)

ORG: none

TITLE: Dynamometer with digital exhibition for deep pumping wells

SOURCE: Automatica si electronica, v. 9, no. 5, 1965, 212-217

TOPIC TAGS: petroleum industry equipment, electronic equipment

ABSTRACT: The authors describe an electronic dynagraph with biparametric frequency transducers built at the Oil, Gas, and Geology Institute, and analyze its operation.

Orig. art. has: 11 figures. [Based on authors' Eng. abstr.] [JPRS]

SUB CODE: 11, 09 / SUBM DATE: none / ORIG REF: 007 / OTH REF: 001
SOV REF: 001

Card 1/1 CC

UDC: 621.317.788.092.742

DUMITRESCU, I.; PREDA, I.; TERTISCO, M.

Electronic manometer. Bul Inst Petrol Rom no. 10;151-163 '63.

TERTISHNIK, A.G.

History of the pharmaceutical press in Russia. Apt. delo 14
no. 4:74-77 Jl-Ag '65 (MIRA 19:1)

1. Byuro sudebnomeditsinskoy ekspertizy Ivano-Frankovskogo
oblastnogo otstala zdravookhraneniya.

TERTISHNIK, A.G. [Tertyshnyk, A.H.]

House pharmacies. Farmatsev. zhur. 18 no.5:57-59 '63.
(MIRA 17:8)

1. Oblastnoye byuro sudebno-khimicheskoy ekspertizy g. Ivano-Frankovska.

TERTISHNIK, A.G.

Pharmaceutical activity in the Western Ukraine during the
period of Austro-Hungarian rule, 1772-1918. Apt. delo 12
no. 4:80-81 Jl-Ag '63. (MIRA 17:2)

1. Apteknoye upravleniye Stanislavskogo oblastnogo otdela
zdravookhraneniya.

TERTISHNIK, A.G. [Tertyshnyk, A.H.]

Development of the network of pharmacies in Stanislav Province from
(1945-1959). Farmatsev. zhur. 16 no.6:55-60 '61. (MIRA 15:5)

1. Aptekhr. oye upravleniye Stanislavskogo oblastnogo otdela
zdravookhraneniya.
(STANISLAV PROVINCE--DRUGSTORES)

5(2)
AUTHORS:

Fomin, V. V., Zagorets, P. A., Morgunov, A. F., Tertishnik, I.I.

TITLE:

Extraction of Iron Chloride by Means of Dibutyl Ether

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 10,
pp 2276-2286 (USSR)

ABSTRACT:

The extraction of FeCl_3 from hydrochloric acid solutions by means of organic solvents was discussed frequently (Refs 1-16), but no paper gave the structure of the solvates which FeCl_3 forms there in the organic phase. On passing HCl through a solution of FeCl_3 in anhydrous isopropyl ether Lorin et al (Ref 9) obtained an insoluble precipitate of the composition $\text{HFeCl}_4 \cdot 2\text{E}$ (E = ether), which dissolved on addition of water.

There are no indications available with respect to the solvation of the compound dissolved. In order to investigate the composition of such solvates, the dependence of the partition coefficient on the concentration of the extracting agent on dilution with an inert solvent and maintenance of all other conditions was investigated. This method is based on the fact that

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Extraction of Iron Chloride by Means of Dibutyl Ether

the extraction is considered a chemical reaction:

$\text{Fe}^{3+}_{\text{aq}} + \text{H}^+_{\text{aq}} + x\text{E}_{\text{org}} + y\text{H}_2\text{O} \rightleftharpoons \text{HFeCl}_4 \cdot x\text{E} \cdot y\text{H}_2\text{O}_{\text{org}}$ (org=organic phase). If the concentration of the ions H^+ and Cl^- is kept constant and no polymerization occurs, the logarithm of the partition coefficient must be a linear function of the equilibrium concentration of the ether. In order to be able to maintain the concentration of H^+ and Cl^- , it must be known, how far the acid is extracted by the ether. Therefore the first part of this paper deals with the extraction of HCl by dibutyl ether (DBE) and by mixtures of DBE and CCl_4 and DBE and benzene (Tables 1-3, Figs 1-3). The results indicate that in the organic phase the compound $\text{HCl} \cdot \text{DBE}$ occurs which is also confirmed by cryoscopy. Then, the extraction of FeCl_3 with the same solvents is investigated (Tables 6-7, Fig 4). On extraction from 10-n HCl the tri solvate $\text{FeCl}_3 \cdot x\text{H}_2\text{O} \cdot 3\text{DBE} \cdot y\text{H}_2\text{O}$ is formed in the organic phase. If DBE is diluted with benzene, the partition coefficient is directly proportional to the third power of the DBE activity, whereas on dilution with CCl_4 the partition coefficient decreases more rapidly than would correspond with the

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Extraction of Iron Chloride by Means of Dibutyl Ether

calculated activity of DBE. There are 4 figures, 10 tables,
and 22 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy khimiko-tehnologicheskiy institut im. D. I. Men-
deleyeva (Moscow Institute of Chemical Technology imeni
D. I. Mendeleev)

SUBMITTED: July 2, 1958

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TERTISHNIKOV, B.A.

Work in the name of a great goal. Avtom., telem.i sviaz' 7
no.3:19-21 Mr '63. (MIRA 16:2)

1. Nachal'nik Povorinskoy distantsii signalizatsii i svyazi
Yugo-Vostochnoy dorogi.
(Railroads—Employees)
(Railroads—Signaling—Centralized traffic control)

KAPINA, G.G., polkovnik meditsinskoy sluzhby; TARTITSA, Ye.Ye. (Kiyev)

Dependence between various protein fractions of the blood and the
erythrocyte sedimentation reaction. Vrach.delo no.10:1099-1101 '59.
(MIRA 13:2)

(BLOOD PROTEINS) (ERYTHROCYTES)

TERTITSKIY, M.

Simplifying the method of sudden observations. Biul. nauch.
inform. i trud i zav. plata 3 no.3:24-26 '60.
(MIRA 13:8)
(Syktyvkar--Woodworking industry)
(Time, study)

TEHTITSKIY, M.

Simplified method of photographing a workday. Sots. trud. 4 no.10:
115-120 0 '59
(MIRA 13:3)

1. Zaveduyushchiy laboratoriyye ekonomiki lesnoy promyshlennosti
instituta Komigoronilesprom.
(Time study)

TERTJAK, F.

The industrialization of Egypt and the problem of labor. p. 409.
(Nova Proizvodnja. Vol 7, no. 6, Feb. 1957, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) LZ, Vol. 6, no. 7, July 1957, Uncl.

TEFTORYAN, A. B., TUPRIYANOVA, L. I., IVAYUKOV, I. V., NIKOLAEVA, V. G.,
MITROFADEV, G. M. (SECTION III)

"Carbamide Deparaffination of Oil Fractions."

Report submitted at the Fifth World Petroleum Congress, 30 May -
5 June 1959. New York.

TERTOV, B. A.

CATALYST

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Organic Chemistry

Ornagline derivatives. IX. Mechanism of Pictet reaction.

With contributions from B. A. Tertov
State Univ., Rostov). Zhur. Organich. Khim. 22, 2300-3
(1952); cf. C.A. 47, 1224; 47, 2761b.—Heating alkylated acylanilines or acylated *o*-toluidines with $ZnCl_2$ leads to α - and β -substituted quinolines. The accepted mechanism of the Pictet reaction indicates the impossibility of obtaining γ -alkylated quinolines by this method; the scheme proposed involving the formation of 2-alkylindoles which then undergo ring expansion to form the quinolines. Heating 15 g. *N*-methylacetanilide and 15 g. $ZnCl_2$ 3 hrs. at 290–300°, soln. of cooled product in HCl, treatment with 40% NaOH, steam distn. and treatment of the crude bases with Ac_2O , gave an unquoted yield of quinoline, isolated as picrate, m. 198°; also prep'd. from 15 g. *N*-acetyl-*o*-toluidide and 15 g. $ZnCl_2$ after 6 hrs. at 290–300°, and from 15 ml. $Pb(NHNH_2)_2$ and 15 ml. Me_2CO heated to 100° 1 hr., then to 290–300° with 25 g. $ZnCl_2$ for 3 hrs. Heating 5 g. *N*-ethylacetanilide and 15 g. $ZnCl_2$ 4 hrs. to 290–70° gave quinaldine, isolated as picrate, m. 190°; styphnate, m. 211°; $Pb(NHNH_2)_2$ (15 ml.) and 20 ml. Et_2CO and 25 g. $ZnCl_2$ also gave quinaldine (picrate, m. 190°). Similarly *N*-propionyl-*o*-toluidine or *N*-methylpropionyl-aniline with $ZnCl_2$ gave β -methyl-quinoline (picrate, m. 188°; styphnate, m. 185°).

G. M. Koslapoff

*9-2-54
ggp*

Tertov, B. A.

USSR/Chemistry - Synthesis

Card 1/1 Pub. 151 - 25/38

Authors : Ardashov, B. I., and Tertov, B. A.

Title : Investigation of quinoline derivatives. Part II.- Synthesis of lepidine and its derivatives from acetylated aryl amines

Periodical : Zhur. ob. khim. 24/2, 314-317, Feb 1954

Abstract : The synthesis of lepidine, 6-methyllepidine and a hitherto unknown 4,8-dimethylepidine from acetylated aromatic amines, formaldehyde and acetone, in an alcohol solution in the presence of ferric chloride, is described. The newly developed method for the synthesis of lepidine and its derivatives was found to require comparatively little time (4 - 5 hrs) and is therefore recommended as a preparative method for the derivation of above mentioned substances. The effect of amine salt addition to the reaction mixture on the yields of lepidine products is explained. Nine references: 7-USSR; 1-USA and 1-German (1886 -1954).

Institution : The V. I. Molotov State University, Rostov

Submitted : September 4, 1953

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420016-0

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420016-0"

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755420016-0"

AUTHORS:

Fertov, B. A., Ardashev, B. I.

79-11-25/56

TITLE:

Synthesis of the Lepidine-Bases From Arylamines and Carbonyl Compounds (Sintez lepidinovykh osnovaniy iz arilaminov i karbonil'nykh soyedineniy).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11,
pp. 3026-3028 (USSR)

ABSTRACT: Bayer's (Beyeru) synthesis of lepidine from aniline, formaldehyde and acetone belongs to the organic processes which consist of many and partially very rapidly progressing side reactions. Pictet and Niesner tried the same conversion with arylamines and obtained lepidine and its homologues only in a small yield of 3-5% of theory. By further tests this yield was not significantly increased. After analyzing the most important direction of reaction (formation of butanon-aniline) and a number of side directions the authors came to the conclusion that the reaction should most expediently be carried out with small concentrations of aromatic amine and formaldehyde in the reaction mixture and with a large excess of acetone. The authors found that with arylamines, formaldehyde and acetone in the presence of iron chloride and

Card 1/2

Synthesis of the Lepidine-Bases From Arylamines and
Carbonyl Compounds

79-11-25/56

zinc chloride the yields of lepidine bases are increased to 15-37%. The method suggested can be employed in the production of considerable quantities of lepidine bases. There are 7 references, 4 of which are Slavic.

ASSOCIATION: Rostov-na-Donu State University (Rostov-na-Donu Gosudarstvennyy universitet).

SUBMITTED: November 9, 1956

AVAILABLE: Library of Congress

1. Lepidines - Synthesis
2. Arylamines - Chemical reactions
3. Carbonyls - Chemical reactions

Card 2/2

TERTOV, B. A.: ^(anab.) Master Chem Sci (diss) -- "Investigation of lepidine and its derivatives". Rostov na Donu, 1958. 10 pp (Rostov State U, Chair of Organic Chem), 150 copies (KL, No 2, 1959, 11.8)

5(3)

sov/79-29-9-53/76

AUTHORS: Ardashev, B. I., Tertov, B. A.

TITLE: Investigations in the Field of Quinoline and Its Derivatives.
XXIII. N-Aryl Lepidinium Salts

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3050-3052
(USSR)

ABSTRACT: The rare papers published on the subject of quaternary N-aryl salts of quinoline and its derivatives are mentioned (Ref 1), and the papers by G.T. Elyugin et al. (Refs 2-5) are discussed in detail. The authors found that according to the method devised by them (Ref 6) diarylamines condense jointly with formaldehyde and ketones at normal pressure (Ref 6) under the formation of N-aryl lepidinium salts in a yield of 15-19% (Scheme). It is interesting to note that the introduction of nitrobenzene into the reaction mass increases the yield by four to five times. There are 6 Soviet references.

ASSOCIATION: Novocherkasskiy politekhnicheskiy institut (Novocherkassk Polytechnic Institute)

SUBMITTED: July 22, 1958
Card 1/1

TERTOV, B. A.

PHASE I BOOK EXPLOITATION SOVA350

Soveshchaniye po khimi, tekhnologii i priborostroyeniyakh

piridina i khinolina. Riga, 1957.

Khimia, tekhnologiya i priemnye proizvodstva piridina,³

khinolina; materialy soveshchaniya (Chemistry, Technology

and Utilization of Pyridine and Quinoline Derivatives;

Materialy na konferentsii (Materials of the Conference) Riga, Izd-vo AN Latvijos SSR, 1960. 299 p. Kratai slip inserted. 1,000 copies

printed.

Sponsoring Agencies: Akademija nauk Latvijos SSR. Institut

khimii vsesoyuznogo khimicheskogo obshchestva.

Ed.: S. Barthanova; Tuch, E.; A. Krasava; Editorial Board: Yu. A. Barkovskiy, Candidate of Chemistry, E. V. Venage, Candidate of Chemistry (Head, Ed.), L. P. Zalukayev, Doctor of Chemistry, and M. M. Kalnins.

PURPOSE: This book is intended for organic chemists and chemical engineers.

CONTENTS: The collection contains 33 articles on methods of synthesis of producing pyridine, quinoline, and their derivatives from natural sources. No personalities are mentioned. Figures, tables, and references accompany the articles.

III. SYNTHETIC MEANS OF PREPARING PYRIDINES AND QUINOLINES

Sakharov, A. S. and O. S. Gerasimova. [Synthesis]

Ural'skij universitet imeni V. I. Lenina. [Central Scientific

Research Institute of Synthetic Studies]

Tikhonov, N. I., B. P. Uvarov, N. M. Kirilin, N. V. Tikhonova, and V. V. Zhdanov. [Synthesis]

Ural'skij universitet imeni V. I. Lenina. [Central Scientific

Research Institute of Synthetic Studies]

Kosch, M. M. [On the Preparation of Pyridine Compounds by the Technical Plant of the Ministry of the Chemical Industry]. Technical Seminars of 2-Methyl-5-Aminopyridine and 2-Methyl-5-Aminopyridine and Their Fields of Application. 97

Vinnik, I. I. [Synthesis of Organic Compounds Based on Pyridine]. The Synthesis of the

Academy of Sciences Latvian SSR]. The Transition

111

From 1,3-Dihydropyridine Derivatives

Kosch, M. M. [On the Preparation of Heterocyclic Compounds

Based on the Institute for High Molecular Compounds of the Academy of Sciences USSR]. Synthesis and Polymerization of Unsaturated Compounds of the Pyridine and Quinoline Series. 119

A. Petrov, B. I. [Bashkirskij Gosudarstvennyj universitet imeni F. M. Dostoevskogo]. Industrial Synthesis of Leptane. 127

Bashkir State University. Institute of Technology

Fedorov, B. A. [Perm'kiy gosudarstvennyj institut po chernoustroystvovaniju, Gossintekhnicheskij Institut of

Tehn. i agricul'tural. inovacij], Gossintekhnicheskij Institut of

Gosudarstv. Bases Prod. Apparatus, Kettes and Autopoles

Bashkir. T. K. [Bashkir State University]. Preparation of

Quinolines From Sodium Aryl Aromatic Acid Salts

Nikol'skov, I. I. [Vsesoyuznyj nauchno-tekhnicheskij tsentr khimicheskikh reakcijev (All-Union Scientific Center of Chemical Reactions)]. Study of the

Catalytic Syntheses of 2-Phenyl-5,6-dioxoquinoline Deriva-

tives. 149

Terterov, B. A. [Rostov State University]. Synthesis Of Some N-Arylquinolines

5-O-Aryl Quinolines. 151

Terterov, M. S. and O. K. Kos'yanen. [Perm'kiy gosudarstvennyj

Forsch. Chernichesk. Inst. F. I. Shchegolev]. Preparation of the

Catalytic Syntheses of 2-Phenyl-5,6-dioxoquinoline Deriva-

tives. 159

Arzhetzer, V. F. [Rostov State University]. Catalytic Con-

version of Aryl Amines to Quinolines. 171

Zelenskij, B. P. Products of the Oxidation of Aromatic and

Heterocyclic Derivatives With Arsenic in a Neutral

Medium. 175

DALGATOV, D.D.; TERTOV, B.A.; GAYVORONSKIY, V.M.; OSIPOV, O.A.

Structure of 2-formylbenzimidazole. Zhur. VKHO 8 no.5:582-
583 '63. (MIRA 17:1)

1. Rostovskiy gosudarstvennyy universitet.

TERTOV, B.A.; PANCHENKO, S.Ye.

Reaction of phenylsodium with quinoline and quinaldine. Zhur. ob. khim.
33 no.4:1277-1280 Ap '63. (MIRA 16:5)

1. Rostovskiy gosudarstvennyy universitet.
(Sodium) (Quinoline) (Quinaldine)

TERTOV, B.A.; IVANKOVA, N.A.; SIMONOV, A.M.

Derivatives of benzimidazole. Part 11: Interaction of
1-phenylbenzimidazole with n. butyllithium and phenyllithium.
Zhur. ob. khim. 32 no. 9:2989-2991 S '62. (MIRA 15:9)

1. Rostovskiy gosudarstvennyy universitet.
(Benzimidazole) (Lithium)

ARDASHEV, B.I.; TERTOV, B.A.

Certain problems of quinoline chemistry. Uch.zap.RGU no.60:191-
205 '59. (MIRA 14:10)
(Quinoline)

POZHARSKIY, F.T.; KAZANBIYEVA, M.A.; TERTOV, B.A.

1-Hydroxymethyl derivatives of indazoles. Zhur. ob. khim. 34 no.10:
3367-3370 O '64. (MIRA 17:11)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

*ca**TERTS, I.**13*

The lime requirement of soils of various textures
István Terts, *Jell. Faculty Hort. Univ. of Szeged*, 1947
Növ. Bul. 12, 185-200(1948). Various methods give
various results for the lime requirement of soils. The
method of Kappen, with Ca acetate, and method of
Madaras, based on absorption of NH_4 , were compared with
the standard method of Jensen in investigations on 51
different soil samples of Hungary covering all types from
sandy to heavy clay soils. The results obtained by the
two methods are different. The lime requirement of
soils varies with their texture, fine textured soils having
higher absorption capacities. In the calcs, a single coeff.
seems to be sufficient in place of the different coeffs. now
used in Hungary, since there is a reversed correlation of
vol. wt. to the texture of soils which has a compensating
effect. Under Hungarian conditions the following simple
method is proposed: 20 g. soil is let stand with 50
ml. Ca(OAc)_2 soln. for 24 hrs. or shaken for 1 hr. if the
time is important. The value obtained for hydrolytic
activity should be multiplied with 5 to obtain lime require-
ment. This amt. of lime should not be given at once
but preferably in 2-3 years until the pH value of the soil
measured in N KCl reaches 6.0-6.5 (in sandy soils) or
7.5-8.0 (in heavy soils). (50 references. István Endre)

TERTS, ISTVAN.

A magyar talajtani irodalom bibliográfiája 1914-1953. Budapest, Akadémiai Kiadó, 1957. 88p. (Bibliography of Hungarian literature on soil science, 1914-1953. In German and Hungarian indexes)

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

TERTS, Margit

Chemistry in horticultural production. Mezogazd techn 1
no. 6:30 '61.

TERTUS, A.

Statistical analysis of payment operations. Den. i kred. 16 no.9:73-83
S '58. (MIRA 11:10)
(Payment--Statistics)

GINDIN, M.; TERTUS, A.

The new method is applied sensibly. Den. 1 kred. 16 no. 10:35-43
(MIRA 11, '1)
O '58.
(Credit)

TERTUS, A.

Statistical analysis of State Bank credit operations. Den.1 kred.
17 no.5:84-93 My '59. (MRA 12:10)
(Credit)

TERTUS, A.

Computing the average time of loans issued by the State Bank,
Den. i kred. 15 no.7:41-43 J1 '57. (MLRA 10:8)
(Credit)

TERTUS, A.

TERTUS, A.

~~New developments in the organization of statistical reports of
the State Bank. Den.1 kred. 15 no.11:22-31 N '57. (MIRA 10:12)~~
(Banks and banking--Accounting)

TERTUS, A.

Refusing acceptances. Den. i kred. 18 no.11:21-29 H'60.
(MIRA 13:11)

(Acceptances)

RYAUZOV, Nikolay Nikolayevich, prof.; TERTUS, Andrey Fomich; POGODIN, Yu.,
red.; TELEGINA, T., tekhn. red.

[Bank statistics] Bankovskaya statistika. Izd.2., perer. i dop.
Moskva, Gosfinizdat, 1961. 235 p. (MIRA 14:11)
(Banks and banking--Statistics)

TERTUS, G.P.

Technical progress and the concentration of open-hearth furnace
plants. Izv. vys. ucheb. zav.; chern. met. 6 no.6:214-218 '63.
(MIRA 16:8)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Steel industry) (Open-hearth process)

ACCESSION NR: AP4009942

S/0057/64/034/001/0186/0188

AUTHOR: Provalov,A.V.; Tert'yakov,O.A.; Shestopalov,V.P.

TITLE: Experimental investigation of the diffraction of electromagnetic waves by double metallic gratings

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 186-188

TOPIC TAGS: diffraction, electromagnetic waves, microwave diffraction, microwave grating, diffraction grating, double grating, double diffraction grating

ABSTRACT: Normal incidence reflection and transmission coefficients of 34 double-metallic diffraction gratings were measured and the results were compared with theoretical calculations previously published by two of the authors (O.A.Tert'yakov and V.P.Shestopalov,ZhTF,33,10,1963). Each double grating consisted of two identical plane gratings so mounted parallel to each other that the plane midway between them was the symmetry plane of the system. The component plane gratings were constructed by fastening copper foil strips to a sheet of polystyrene foam. The ratio of slot width to grating constant was varied from about 0.2 to 0.6; the ratio of the grating constant to the wavelength was varied from 0.6 to 1.6; the ratio of the distance

Card 1/2

ACC.NR: AP4009942

between the component gratings to the grating constant was varied from 0.25 to 2. The dimensions of the gratings were 19.5 cm x 14.5 cm, but the actual grating spacings and wavelengths employed are not given. Microwaves were normally incident on the gratings with the electric vector parallel to the slots. The radiating and receiving antennas were identical horns having directional pattern widths of about 11° in the E plane and 7° in the H plane. The measured and calculated reflection and transmission coefficients are tabulated. The agreement is satisfactory and thus justifies use of the present experimental techniques in the investigation of more complex structures for which an exact theory is not available. Orig.art.has: 3 figures and 2 tables.

ASSOCIATION: Khar'kovskiy gosuniversitet im.A.M.Gor'kogo (Khar'kov State University)

SUBMITTED: 29Jul63

DATE ACQ: 10Feb64

ENCL: 00

SUB CODE: PH

NR REF SCV: 002

OTHER: 000

Card 2/2

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755420016-0

TE2 diesel locomotive; layout and operation Moskva, Gos. transp. zhel-dor. izd-vo, 1952.
248 p. (53-30364)

TJ619.T4

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755420016-0"

TERTYCHKO, MIKOLAY ALEXSEYEVICH

N/5
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1955

Teplovoz TE2; ustroystvo, ukhod i remont (Locomotive TE2; layout, maintenance and repair, by) N. A. Tertychko (and) Timofey Fedorovich Kuznetsov. Izd. 2, dep. Moskva, Transzheldorizdat, 1955.
359 p. illus., diagrs., tables.

TERTYCHKO, Nikolay Alekseyevich; KUZNETSOV, Timofey Fedorovich; DACHUK, L.Ya.,
redaktor; VERINA, G.P., tekhnicheskij redaktor.

[The new TE3 main line diesel locomotive] Novyi magistral'nyi teplo-
voz TE3. Moskva, Gos.transp.zhel-dor. izd-vc, 1956. 94 p. (MIRA 9:6)
(Diesel locomotives)

VERTYCHKO, N.A.

Books on repairing diesel locomotives ("Diesel locomotive repair." N.O.Luginin. "Diesel locomotive repair. The diesel and auxiliary equipment." M.D.Rakhmatulin. Reviewed by N.A.Vertychko). Zhel.dor.transp. 39 no.8:94-96 Ag '57. (MIRA 10:9)

1. Starshiy inspektor Ministerstva putey soobshcheniya na Khar'kovskom zavode transportnogo mashinostroeniya. (Diesel locomotives--Maintenance and repair) (Luginin, N.G.) (Rakhmatulin, M.D.)

TERTYCHKO, Nikolay Alekseyevich; TYRICHEV, Al'bert Georgiyevich;
TISHCHEVKO, Nikolay Ivanovich; KESAREV, A.P., inzh., retsenzent;
VUL'F, V.V., inzh., red.; KHITROV, P.A., tekhn.red.

[Inspection and adjustment operations in the repair of diesel
locomotives] Proverki i regulirovki pri remonte teplovozov.
Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshche-
niia, 1960. 291 p.
(Diesel loccmotives--Maintenance and repair)

MINENKO, V.A.; ALEKSANDROV, A.A.; SVETS, V.Ye.; BORZENKO, V.P.; KURILOV,
P.G.; KHAZANOVICH, N.L.; Prinimali uchastiye: POPOV, A.I.;
KONOVALOV, A.N.; TERTYCHNAYA, I.Yu.; POSHKREBNEV, V.P.;
DMITRIYEVA, S.M.; KORNILOVA, A.V.

Work organization in the section, of metal feed to blooming
mills. Met. i gornorud. prom. no.2:67-68 Mr-Ap '64.

(MIRA 17:9)

TERTYCHNAYA, L. A. Cand Agr Sci -- (diss) "Methods of the utilization of
under granulated superphosphates ~~for~~ vegetable crops." Mos, 1957. 17 pp (Mos Order
of Lenin Agr Acad im K. A. Timiryazev), 110 copies (KL, 4-58, 85)

CA TERTYCHNAYA, L.A.

The influence of granulation and methods of applying
superphosphate on the utilization of phosphorus by plants
N. S. Averbukh and L. A. Tertychnaya. Sovet. Agron. 7,
No. 10, 60-68(1949). "Pravda" with powder granulated
superphosphate proved the superiority of the latter.
Only small quantities of superphosphate can be applied
in the row with effectiveness. I. S. Tolle

CB TERTYCHNAYA, L.A.

The residual effects of granulated fertilizer. [L. A. Tertychnaya, *Soviet Agron.*, 9, No. 12, 73 (1951).] Granulated superphosphate appears to be effective on the crops following those fertilized. J. S. Joffe

ASONOV, B., inzh.; MOROB'IEV, V., inzh.; TERTYCHNYY, A., inzh.

Large supply combine in one building. Na stroi. Ros. 4 no.5:22-23
My '63. (MIRA 16:5)
(Moscow--Industrial buildings--Design and construction)
(Moscow--Food industry)

UDOVITSKIY, S.; SHEMETS, A.; LILOV, A. (Chernovtsy); KLINKOV, I. (Serpukhov
Moskovskoy obl.); TERTYCHNYY, F. (Makeyevka Donetskoy obl.);
BOROD'KO, I. (Vorkuta, Komi ASSR); BAZUKIN, P. (Novokuznetsk,
Kemerovskoy obl.)

From the editor's mail. Sov. profsoiuzy 20 no.2:32-33 Ja'64.
(MIRA 17:2)

1. Zaveduyushchiy yuridicheskim sektorom Ukrainskogo
respublikanskogo soveta professional'nykh soyuzov, Kiyev
(for Uдовитский). 2. Konsul'tant yuridicheskogo sektora
Ukrainskogo respublikanskogo soveta professional'nykh
soyuzov, Kiyev (for Shemets). 3. Neshtatnyy korrespondent
zhurnala "Sovetskiye profsoyuzy" (for Brorod'ko).

L 17717-66 EPF(n)-2/EWA(h)/EWP(j)/ENT(m)/T/EWA(l) GG/RM/WW

ACC NR: AP6003409 (A) SOURCE CODE: UR/0190/66/008/001/0026/0030

AUTHORS: Uakov, I. A.; Tertykh, L. I.; Solemko, V. P.; Polishchuk, Yu. N. 54
B

ORG: Kiev State University im. T. G. Shevchenko (Kiyevskiy gosudarstvennyy universitet); Institute of Physical Chemistry, AN UkrSSR (Institut fizicheskoy khimii AN UkrSSR)

TITLE: Radiation polymerization^{144.55} of methylmethacrylate¹ and styrene¹ in the presence of mineral fillers¹⁹

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 1, 1966, 26-30

TOPIC TAGS: radiation polymerization, styrene, methylmethacrylate, gamma radiation

ABSTRACT: Polymerization of styrene (I) and methylmethacrylate (II) in contact with mineral fillers (silica gel, kaolin, asbestos, glass fiber), insert under ordinary conditions, was studied for the reaction to γ -radiation. It was established that: 1) mineral fillers accelerate the polymerization process and increase molecular weight of homopolymer; 2) during ionization irradiation a grafted polymer is formed on the surface of the filler and held strongly by chemical bond forces; 3) with increased temperature, the yield of homopolymer and the

Card 1/2

UDC: 66.095.26+678.744+678.746

L 17717-66

ACC NR: AP6003409

grafting of the polymer increases, indicating the free radical character of the process. It was possible to obtain a double-layer grafting of polystyrene to the surface of the mineral filler to which polymethylmethacrylate was grafted previously. The amount of the grafted polystyrene increases when the amount of polymethylmethacrylate decreases. This is explained by a destruction of the polymer matrix occurring during repeated irradiation. Orig. art. has: 4 tables.

SUB CODE: 07/ SUBM DATE: 05Feb65/ ORIG REF: 012/ OTH REF: 006

Card 2/2 nst

L 26688-66 EWT(1)/EWT(m)/EWP(j)/T

WW/R0/JK/RM

ACC NR: AF6016900

SOURCE CODE: UR/0379/65/001/003/0400/0405

53
B

AUTHOR: Tertykh, V. A.; Chukko, A. A.; Neymark, I. Ye.

ORG: Institute of Physical Chemistry im. L. V. Pisarzhevskiy, AN UkrSSR, Kiev
(Institut fizicheskoy khimii AN UkrSSR)

TITLE: Reaction of gamma-aminopropyl- and beta-cyanethyl-triethoxysilanes with aerosol surface using infrared spectroscopy

SOURCE: Teoreticheskaya i eksperimental'naya khimiya, v. 1, no. 3, 1965, 400-405

TOPIC TAGS: aerosol chemistry, aerosol, IR spectroscopy, silica, organic nitrogen compound, hydrogen bonding, adsorption

ABSTRACT: Surface modification of aerosols⁶ by vapors of γ -aminopropyl- and β -cyanethyl-triethoxysilanes and their benzene solutions was investigated. Upon contact of alkoxy silanes with surface OH groups of the silica, an organo-silyl layer is formed which is stable under vacuum conditions up to high temperatures. The condensation reaction evidently occurs first of all on surface hydroxyls that are not hydrogen bonded. The behavior of cyanorganic-silyl groups as new possible sites of adsorption was discovered. It was shown that the CN-group band (2249 cm^{-1}) does not change its position upon the adsorption of different compounds. The authors thank A. N. Sidorov and Academician A. N. Terenin for their assistance in carrying out this work. Orig. art. has: 5 figures. [JPRS]

SUB CODE: 07 / SUBM DATE: 28Dec64 / ORIG REF: 015 / OTH REF: 002

Card 1/1 BLG

L 00733-67 EWT(m)/EWP(j)/T IJP(c) MM/RM
ACC NR: AP6024846 (A)

SOURCE CODE: UR/0073/66/032/004/0371/0377

AUTHOR: Chuyko, A. A.; Pavlik, G. Ye.; Tertykh, V. A.; Chuyko, Ye. A.; Artemov, V. A.; Neymark, I. Ye.; Tsipenyuk, E. V.

ORG: Institute of Physical Chemistry, AN UkrSSR (Institut fizicheskoy khimii AN UkrSSR) 43
B

TITLE: Carboxylorganosilicas - chemically active fillers for polymers. Report No. 1.
Synthesis and adsorption properties of carboxylorganosilicas, and their use in the re-inforcement of vinylpyridine rubber 15

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 32, no. 4, 1966, 371-377

TOPIC TAGS: silica, graft copolymer, synthetic rubber, filler

ABSTRACT: Carboxyl derivatives of SiO₂ were synthesized by copolymerization of methacrylic acid with vinyl silicas having various quantities of grafted vinyl groups on their surface. IR spectroscopic and ion exchange methods confirmed the grafting of methacrylic acid to the surface of vinyl silica. A study of the surface characteristics showed that methanol, diethylamine, and pyridine are chemisorbed on the acid functional groups of the carboxylorganosilicas, forming the corresponding surface compounds. Filling of a vinylpyridine polymer (SKHVP-15) with carboxylorganosilicas caused a reinforcement of the polymer system, probably because of a chemical interaction between the carboxyl groups of the filler and the basic pyridine groups of the rubber macromol-

Card 1/2

UDC: 541.182.23

L 06733-67

ACC NR: A26024846

ecules, resulting in the formation of cross linkages. Orig. art. has: 3 figures and
1 table.

SUB CODE: 11/ SUBM DATE: 22Jul64/ ORIG REF: 006/ OTH REF: 006

Card 2/2 LC

L 34420-66 EWT(m)/EWP(j) RM
A.U.C. Nk: AP6010549

SOURCE CODE: UR/0069/65/027/006/0903/0907

AUTHOR: Chuyko, A. A.; Tertykh, V. A.; Plavnik, G. Ye.; Neymark, I. Ye.

ORG: Institute of Physical Chemistry im. L. V. Pisarzhevskiy, AN USSR, Kiev (Institut fizicheskoy khimii AN USSR)

TITLE: Aminoorganosilicas as chemically active adsorbents and fillers for polymeric materials. Part 1. Study of the interaction of gamma-aminopropyltriethoxysilane with SiO_2 surface and adsorptive properties of aminoorganoaerosils

SOURCE: Kolloidnyy zhurnal, v. 27, no. 6, 1965, 903-907

TOPIC TAGS: silane, silica, IR spectrum, organic nitrogen compound, organosilicon compound, adsorption, hydroxyl group, heptane, methanol

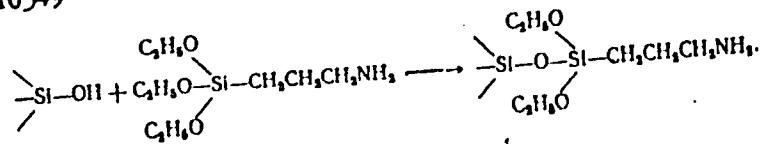
ABSTRACT: The interaction of γ -aminopropyltriethoxysilane with the hydroxyl groups of aerosil (powdered silica) surface was investigated by means of IR absorption spectra. Aminoorganosilicas with various contents of amino groups on their surfaces were synthesized, and their adsorptive properties were determined. The decrease in the concentration of hydroxyl groups on the silica surface, the simultaneous increase in the concentration of aminoorganosilyl groups, and the irreversibility of the phenomena occurring during the modification process are accounted for by the following surface chemical reaction:

UDC: 541.18.02

Card 1/2

L 74420-66

ACC NR: AP6010549



The adsorption of heptane, benzene, and methanol vapors was studied on aminoorgano-aerosils in a vacuum adsorption apparatus. The replacement of a part of the hydroxyl groups of the aerosil surface by the aminoorganic radicals was found to decrease the adsorption of not only methanol and benzene, which are adsorbed owing to electrostatic forces, but also that of heptane, which is adsorbed by a dispersion mechanism. It is concluded that the interaction of an aminoethoxysilane with the aerosil surface involves the formation of an aminoorganosilica whose surface has a complex chemical character and should react with acidic substances, for example, polymers containing acidic functional groups. Authors thank Academician A. N. Terenin for interest in this work and A. N. Sidorov for assistance. Orig. art. has 5 figures.

SUB CODE: 07/ SUBM DATE: 22Jul64/ ORIG REF: 007/ OTH REF: 003

Card 2/2

41266-66 EWT(m)/ENH(1)/I LJP(c) WN/JWD/RM
ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED
DATE 1987 BY 6022447 (A) SOURCE CODE: UR/0069/66/028/002/0278/0282

AUTHOR: Tertykh, V. A.; Chuyko, Ye. A. -- Chuiko, E. A.; Chuyko, A. A. -- Chuiko,
A. A.; Neymark, I. Ye. -- Neimark, I. E. 38
36
B

ORG: Institute of Physical Chemistry, AN UkrSSR, Kiev (Institut fizicheskoy khimii AN
UkrSSR)

TITLE: Amino-organo silicas as chemically active sorbents and fillers of polymer materials 1 15

SOURCE: Kolloidnyy zhurnal, v. 28, no. 2, 1966, 278-282

TOPIC TAGS: organosilicon compound, polymer physical chemistry, chemical absorption

ABSTRACT: Clarification of mechanisms by which acid substances react with an adsorbent surface was sought through an analysis of infrared absorption spectra for the adsorption of hydrogen chloride on amino organosilica and of methacrylic acid on an amino organoaerosil. A supplementary analysis concerned adsorption of methacrylic acid on the named aerosil from an aqueous solution. Another aspect of the study involved reinforcement of the carboxyl-containing polymer SKS 30-1 by dispersion type amino organosilicic fillers. Results indicate that chemisorption occurs, with an accompanying formation of chemical compounds on the adsorbent surface. Amino and vinylamino derivatives of silica white A, used as fillers, reinforced the carboxyl-containing polymer through interaction of functional groups and the accompanying

UDC: 541.183.23

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ACC NR: AP6022447

crosslinking of polymer and filler. With great satisfaction, the authors express their gratitude to Candidate of Physical-Mathematical Sciences A. N. Sidorov and Academician A. N. Terenin for their advice and assistance in performing the work. Orig. art. has: 1 table and 3 figures.

SUB CODE: 07/ SUBM DATE: 22Jul64/ ORIG REF: 002/ OTH REF: 001

Card 2/2 L

SOURCE CODE: UR/0436/66/000/005/0024/0028

ACC NR: AP6036343

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TITLE: Thermophysical properties of certain thermoplastic polymers

SOURCE: Khimicheskaya promyshlennost' Ukrayny, no. 5, 1966, 24-28

TOPIC TAGS: heat conductivity, heat diffusion, specific heat, thermoplastic material, polystyrene, polyethylene plastic

ABSTRACT: In order to determine the effect of structure on the thermophysical properties of polymers, crystalline polymers of various degrees of crystallinity and amorphous polymers were studied: high-density (low pressure) polyethylene (80-90% of crystalline phase), low-density (high pressure) polyethylene (55-70% of crystalline phase), and block and impact-resistant polystyrene (amorphous structure). The thermal conductivity coefficient was found to be practically independent of pressure, and in crystalline polymers in the solid phase the thermal conductivity is much greater than in amorphous ones and decreases with rising temperature. The specific heat of crystalline polymers increases with rising temperature and has a peak in the region of the phase transition; it does not change in the melt as the temperature rises. The temperature and pressure dependence of the thermal diffusivity was also studied. The investigated thermophysical properties of the polymers cover completely the range

UDC: 678.5.004.12

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